

# PERCEIVED EASE OF USE, SOCIAL INFLUENCE AND ENJOYMENT AS PREDICTORS OF BEHAVIOURAL INTENTION TO USE E-LEARNING SYSTEMS AMONG UNIVERSITY STUDENTS

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**Abstract:** *The increasing reliance on e-learning systems in higher education has heightened the need to understand factors that influence students' intention to adopt and continue using such systems. Grounded in an extended Technology Acceptance Model (TAM), this study examines the roles of perceived ease of use, social influence and perceived enjoyment as predictors of behavioural intention to use e-learning systems among university students. Employing a quantitative, cross-sectional research design, data were collected using a structured questionnaire administered to students at a public university. Following data screening procedures, 151 valid responses were analysed using descriptive statistics, Pearson correlation analysis and multiple regression analysis. The findings reveal that perceived ease of use, social influence and perceived enjoyment are all positively associated with behavioural intention at the correlational level. However, multiple regression results indicate that perceived enjoyment and social influence are significant predictors of behavioural intention, with perceived enjoyment exerting the strongest influence, while perceived ease of use does not independently predict intention when other variables are controlled. These findings contribute empirical evidence to the e-learning adoption literature and highlight the importance of affective and social factors in promoting students' continued use of e-learning systems in higher education.*

**Keywords:** *E-Learning Systems, Behavioural Intention, Perceived Enjoyment, Social Influence, Technology Acceptance Model.*

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## Introduction

The adoption of e-learning systems has become a critical component of higher education in Malaysia, particularly within public universities where digital platforms such as i-Learn, Google Classroom and other Learning Management Systems (LMS) are widely implemented to support teaching and learning activities. The COVID-19 pandemic significantly accelerated the integration of e-learning technologies, forcing institutions to transition rapidly to fully online learning environments. Although face-to-face instruction has resumed, e-learning systems continue to play a vital role in supporting blended learning approaches, where online and physical learning environments are integrated to enhance flexibility, accessibility and student engagement.

In Malaysian public universities, the sustained use of e-learning systems beyond the pandemic underscores the importance of understanding factors that influence students' behavioural intention to adopt and continue using these systems. While earlier studies primarily emphasised functional and cognitive determinants of technology acceptance, such as perceived usefulness and perceived ease of use, recent developments in digital learning environments suggest that students' experiences are increasingly shaped by social and affective factors in addition to system usability.

The Technology Acceptance Model (TAM) remains a widely used theoretical framework for explaining users' acceptance of information systems. However, the traditional TAM framework may not fully capture the complexity of contemporary e-learning environments, particularly in contexts where students are already highly familiar with digital technologies. Therefore, this study adopts an extended TAM by focusing on perceived ease of use, social influence and perceived enjoyment as key predictors of behavioural intention to use e-learning systems.

The inclusion of social influence reflects the role of peers, instructors and institutional expectations in shaping students' technology use behaviour, particularly in structured academic environments. Similarly, perceived enjoyment captures the intrinsic motivation and positive user experience associated with engaging with e-learning systems, which has been increasingly recognised as a critical determinant of sustained system use.

Importantly, the relative importance of perceived ease of use may have evolved in recent years. As university students become more digitally literate and accustomed to using various online platforms, system usability is often regarded as a basic requirement rather than a key motivational factor. Consequently, ease of use may no longer be the strongest predictor of behavioural intention when other factors, such as enjoyment and social influence, are taken into consideration.

Despite the growing adoption of e-learning systems in Malaysian higher education, empirical studies that simultaneously examine the combined effects of perceived ease of use, social influence and perceived enjoyment within a single predictive model remain limited. Therefore,

this study aims to address this gap by investigating how these factors jointly influence students' behavioural intention to use e-learning systems in a public university context.

### **Literature Review**

This section reviews relevant theoretical and empirical studies related to e-learning adoption, with particular emphasis on key determinants influencing students' behavioural intention. It synthesises prior research to establish a conceptual foundation for examining the role of perceived ease of use, social influence and perceived enjoyment.

#### **E-Learning Adoption in Higher Education**

The adoption of e-learning systems has become an integral component of higher education, particularly in the post-COVID-19 era where institutions have transitioned toward blended learning environments. In Malaysia and across Southeast Asia, the use of learning management systems (LMS) has become widespread, supporting flexible and technology-mediated learning (Mailizar et al., 2021; Tawafak et al., 2023). Empirical studies indicate that the success of e-learning systems depends not only on their availability but also on students' behavioural intention to adopt and continue using them (Akpen et al., 2024).

The Technology Acceptance Model (TAM) is one of the most widely applied frameworks for examining users' acceptance of information systems (Davis, 1989). However, recent research suggests that TAM should be extended to include social and affective variables to better capture students' experiences in digital learning environments (Zhang et al., 2024; Getenet et al., 2024).

#### **Perceived Ease of Use and Behavioural Intention**

Perceived ease of use refers to the extent to which individuals believe that using a system requires minimal effort (Davis, 1989). Prior studies consistently report a positive relationship between perceived ease of use and behavioural intention toward e-learning systems (Tawafak et al., 2023; Zhou et al., 2022).

However, its influence may be diminishing in contemporary learning environments. As university students become increasingly familiar with digital platforms, usability is often viewed as a basic requirement rather than a motivating factor. Consequently, the independent effect of perceived ease of use may weaken when other factors are considered (Getenet et al., 2024; Aburbeian et al., 2022).

#### **Social Influence and Behavioural Intention**

Social influence refers to the extent to which individuals perceive that important others encourage or expect them to use a system (Venkatesh et al., 2003). Empirical evidence consistently demonstrates that social influence is a significant predictor of behavioural intention (Tao et al., 2022; Huang & Wang, 2023).

In Malaysian and Southeast Asian contexts, lecturer expectations and peer interactions play a critical role in shaping students' engagement with e-learning systems (Prananto et al., 2025). This suggests that social norms and institutional practices remain influential in determining students' technology adoption behaviour.

#### **Perceived Enjoyment and Behavioural Intention**

Perceived enjoyment refers to the intrinsic satisfaction derived from using a system, independent of its functional benefits (Davis et al., 1992). Recent studies indicate that perceived

enjoyment is a strong predictor of behavioural intention in e-learning environments (Lu & Rameli, 2023; Wu, 2023).

Students who find e-learning systems engaging are more likely to develop sustained usage intentions. Empirical evidence suggests that perceived enjoyment often exerts a stronger influence than traditional TAM constructs (Getenet et al., 2024).

### **Critical Comparison of Predictors**

Although perceived ease of use, social influence and perceived enjoyment have been widely studied, their relative importance varies across contexts. Traditional research emphasised perceived ease of use as a key determinant (Davis, 1989), whereas more recent studies highlight the stronger influence of perceived enjoyment and social influence (Aburbeian et al., 2022; Lu & Rameli, 2023).

These findings indicate a shift from purely functional factors toward affective and social determinants, particularly in digitally mature student populations. Therefore, examining these variables within a single framework is necessary to determine their relative predictive strength.

### **Justification of Model Constructs**

Although TAM originally includes perceived usefulness and attitude, this study focuses on perceived ease of use, social influence and perceived enjoyment. In academic contexts, perceived usefulness is often assumed due to mandatory system usage (Mailizar et al., 2021), while attitude overlaps conceptually with intrinsic motivation constructs such as perceived enjoyment (Davis et al., 1992).

Furthermore, behavioural intention is used as the dependent variable, as it is widely recognised as a strong predictor of actual system usage (Venkatesh et al., 2003).

### **Research Gap**

Despite extensive research, limited studies examine the combined effects of perceived ease of use, social influence and perceived enjoyment within a single model in Malaysian public university contexts. This study addresses this gap by investigating their relative influence on behavioural intention.

### **Methodology**

This section describes the research design, study context, sampling procedures, research instrument, and data analysis techniques employed in this study.

### **Research Design**

This study adopted a quantitative, cross-sectional research design to examine factors influencing university students' acceptance of e-learning systems. An extended Technology Acceptance Model (TAM) was employed to investigate the relationships between perceived ease of use, social influence, perceived enjoyment and behavioural intention to use e-learning systems. A survey method was selected as it is appropriate for examining predictive relationships among variables in technology acceptance research.

### Study Context and Population

The study was conducted at Universiti Teknologi MARA (UiTM), a public university in Malaysia. The target population comprised diploma and degree students enrolled in business and management-related programmes at the UiTM Cawangan Terengganu, Kampus Dungun. These students actively use institutional e-learning platforms, making them an appropriate population for examining behavioural intention toward e-learning systems.

Although the exact population size varies by semester intake, the student population in the selected faculty exceeds several hundred students, providing a sufficient sampling frame for quantitative analysis.

### Sampling Technique and Sample Size

A convenience sampling technique was employed due to accessibility and participation willingness among students. Data were collected through an online questionnaire distributed via institutional communication channels.

A total of 205 responses were initially collected. Following data screening procedures, 54 responses (26.3%) were excluded due to failure in attention-check items embedded within the questionnaire. These items required respondents to select a specific response option (e.g., “strongly disagree”) to confirm that they were reading the questions carefully. A relatively high exclusion rate is not uncommon in online surveys, particularly when responses are collected without supervision, and reflects the effectiveness of attention checks in identifying careless or random responses.

The final sample consisted of 151 valid responses, which satisfies the recommended minimum sample size for multiple regression analysis. According to Hair et al. (2019), a minimum sample size of at least  $50 + 8m$  (where  $m$  is the number of predictors) is required. With three independent variables, the minimum sample size required is 74, indicating that the present study exceeds this threshold.

### Research Instrument

Data were collected using a structured questionnaire adapted from previously validated empirical studies. The instrument comprised four constructs: perceived ease of use, social influence, perceived enjoyment and behavioural intention. Each construct was measured using three items, ensuring a balanced representation of the underlying variables while maintaining a concise and manageable survey structure.

All items were assessed using a five-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree). Minor wording modifications were made to enhance clarity and ensure suitability for the UiTM student context, without altering the original meaning or theoretical foundation of the measurement items.

### Data Screening and Preparation

Data screening was performed to ensure the quality and reliability of responses. Four attention-check items were embedded at different points in the questionnaire. Responses that failed to meet the required selection criteria for any of these items were excluded from the analysis.

After removing 54 invalid responses, a total of 151 valid responses were retained. All questionnaire items were positively worded; therefore, reverse coding was not required. Composite scores for each construct were calculated by averaging the corresponding item responses.

### Reliability and Validity Analysis

Internal consistency reliability was assessed using Cronbach's alpha. The results indicate that all constructs demonstrate acceptable to high levels of reliability. Specifically, perceived ease of use achieved a Cronbach's alpha value of 0.853, while social influence recorded a value of 0.708. Perceived enjoyment exhibited a high reliability coefficient of 0.892, and behavioural intention showed a Cronbach's alpha value of 0.850. All values exceed the commonly recommended threshold of 0.70, indicating satisfactory internal consistency for the measurement scales used in this study.

Construct validity was assessed using exploratory factor analysis. The Kaiser–Meyer–Olkin (KMO) measure of sampling adequacy yielded a value of 0.920, indicating excellent sampling adequacy. In addition, Bartlett's test of sphericity was statistically significant ( $\chi^2 = 1082.324$ ,  $df = 66$ ,  $p < .001$ ), confirming that the correlation matrix was suitable for factor analysis. These results support the adequacy of the data and provide evidence of construct validity for the measurement model.

### Data Analysis

Data analysis was conducted using SPSS. Descriptive statistics were used to summarise respondents' demographic characteristics. Pearson correlation analysis was performed to examine the relationships among variables. Multiple regression analysis was subsequently conducted to determine the extent to which perceived ease of use, social influence and perceived enjoyment predict behavioural intention to use e-learning systems.

### Findings

This section presents the empirical findings of the study. An overview of the respondents' demographic characteristics is first presented to provide context for the subsequent statistical analyses.

**Table 1: Demographic Background of Respondents (N = 151)**

| Demographic Variable | Category             | Frequency<br>(n) | Percentage<br>(%) |
|----------------------|----------------------|------------------|-------------------|
| Gender               | Female               | 108              | 71.5              |
|                      | Male                 | 43               | 28.5              |
| Level of Study       | Diploma              | 147              | 97.4              |
|                      | Degree               | 4                | 2.6               |
| Current Semester     | Semester 1–2         | 47               | 31.1              |
|                      | Semester 3–4         | 83               | 55.0              |
|                      | Semester 5 and above | 21               | 13.9              |

**Note.** Percentages are based on valid responses (N = 151).

## Demographic Background of Respondents

This section presents the demographic characteristics of the respondents included in the final analysis. An overview of the respondents' demographic profile is summarised in Table 1, based on 151 valid responses retained after data screening procedures.

### Gender

With regard to gender, the sample was predominantly female. As shown in Table 1, 108 respondents (71.5%) were female, while 43 respondents (28.5%) were male. This distribution indicates a higher participation rate among female students, a pattern that is commonly reported in empirical studies involving higher education populations, particularly within diploma-level programmes and applied academic fields. The gender composition suggests that the findings of the study largely reflect the learning experiences and perceptions of female students.

### Level of Study

In terms of the level of study, the vast majority of respondents were enrolled in diploma programmes. Specifically, 147 respondents (97.4%) were diploma students, whereas only 4 respondents (2.6%) were pursuing degree-level studies. This distribution indicates that the sample predominantly represents students at the diploma stage of higher education. Students at this level are typically engaged in structured coursework and are active users of institutional e-learning systems, making them an appropriate group for examining factors related to technology acceptance and behavioural intention to use e-learning systems.

### Current Semester

Regarding the current semester of study, most respondents were in the middle stage of their academic programmes. As presented in Table 1, 83 respondents (55.0%) were enrolled in Semester 3–4, representing the largest subgroup in the sample. In addition, 47 respondents (31.1%) were in Semester 1–2, while 21 respondents (13.9%) were in Semester 5 and above. This distribution suggests that more than two-thirds of the respondents had progressed beyond the initial adjustment phase of their programmes and had accumulated sufficient experience with institutional learning systems and online learning platforms.

### Summary

Overall, the demographic profile presented in Table 1 indicates that the respondents predominantly consist of female diploma students who are in the middle semesters of their academic programmes. This composition provides a suitable and relevant context for examining perceived ease of use, social influence, perceived enjoyment and behavioural intention to use e-learning systems. The respondents' level of academic progression suggests that they possess adequate exposure to e-learning environments, allowing for meaningful evaluation of technology acceptance factors.

**Table 2: Pearson Correlation Matrix among Study Variables (N = 151)**

| Variable              | Perceived Ease of Use | Social Influence | Perceived Enjoyment | Behavioral Intention |
|-----------------------|-----------------------|------------------|---------------------|----------------------|
| Perceived Ease of Use | 1                     |                  |                     |                      |
| Social Influence      | 0.507**               | 1                |                     |                      |
| Perceived Enjoyment   | 0.613**               | 0.578**          | 1                   |                      |
| Behavioural Intention | 0.557**               | 0.612**          | 0.772**             | 1                    |

\*\* . p < .01 (two-tailed). Pearson correlation coefficients are reported.

### Correlation Analysis

Pearson product-moment correlation analysis was conducted to examine the relationships among perceived ease of use, social influence, perceived enjoyment and behavioural intention to use e-learning systems. The results of the correlation analysis are presented in Table 2, based on 151 valid responses.

The analysis indicates that perceived ease of use is positively and significantly correlated with behavioural intention to use e-learning systems ( $r = .557, p < .001$ ). This finding suggests that students who perceive e-learning systems as easy to use are more likely to intend to use such systems. The magnitude of the correlation reflects a moderate to strong positive relationship, supporting the proposition that usability is an important factor in technology acceptance.

Similarly, social influence demonstrates a positive and statistically significant relationship with behavioural intention ( $r = .612, p < .001$ ). This result indicates that students are more inclined to use e-learning systems when they perceive encouragement or expectations from peers, instructors, or significant others. The strength of this association suggests that social factors play a meaningful role in shaping students' intention to adopt e-learning technologies.

Among all predictors, perceived enjoyment exhibits the strongest positive correlation with behavioural intention to use e-learning systems ( $r = .772, p < .001$ ). This strong relationship indicates that students who find e-learning systems enjoyable and satisfying are substantially more likely to intend to continue using them. This finding highlights the central role of intrinsic motivation in technology acceptance.

In addition, the independent variables are also significantly interrelated. Perceived ease of use is positively correlated with social influence ( $r = .507, p < .001$ ) and perceived enjoyment ( $r = .613, p < .001$ ). Likewise, social influence is positively and significantly associated with perceived enjoyment ( $r = .578, p < .001$ ). These results suggest that students who perceive e-learning systems as easy to use are also more likely to perceive social encouragement and experience enjoyment when using the system.

Overall, all correlations among the study variables are positive and statistically significant at the 0.01 level. Importantly, none of the correlation coefficients exceed the commonly accepted threshold for multicollinearity concerns ( $r < .80$ ), indicating that the variables are sufficiently distinct and suitable for inclusion in subsequent multiple regression analysis.

**Table 3: Multiple Regression Analysis Predicting Behavioural Intention to Use E-Learning Systems (N = 151)**

| Predictor             | B     | Std. Error | $\beta$ | t     | Sig.   |
|-----------------------|-------|------------|---------|-------|--------|
| Constant              | 0.139 | 0.271      | —       | 0.512 | .609   |
| Perceived Ease of Use | 0.088 | 0.073      | 0.078   | 1.211 | .228   |
| Social Influence      | 0.283 | 0.076      | 0.232   | 3.723 | < .001 |
| Perceived Enjoyment   | 0.585 | 0.067      | 0.590   | 8.683 | < .001 |

**Model statistics:**  $R = .801, R^2 = .641, \text{Adjusted } R^2 = .634, F(3, 147) = 87.601, p < .001$

**Note.** Dependent variable = Behavioural intention to use e learning systems.  $\beta$  = Standardised regression coefficient.

### Multiple Regression Analysis

Multiple regression analysis was conducted to examine the extent to which perceived ease of use, social influence and perceived enjoyment predict behavioural intention to use e-learning systems among university students. Behavioural intention served as the dependent variable, while perceived ease of use, social influence and perceived enjoyment were entered simultaneously as independent variables. The analysis was based on 151 valid responses.

#### Overall Model Fit

The results indicate that the regression model was statistically significant. As shown in Table 3, the model produced a multiple correlation coefficient of  $R = .801$ , with an  $R^2$  value of .641 and an adjusted  $R^2$  of .634. This indicates that 64.1% of the variance in behavioural intention to use e-learning systems is jointly explained by perceived ease of use, social influence and perceived enjoyment. In the context of technology-acceptance and behavioural research, this represents a strong level of explanatory power.

The ANOVA results further confirm the adequacy of the model,  $F(3, 147) = 87.601$ ,  $p < .001$ , indicating that the set of independent variables significantly predicts behavioural intention to use e-learning systems.

#### Individual Predictors

With respect to individual predictors, perceived enjoyment emerged as the strongest and statistically significant predictor of behavioural intention ( $\beta = .590$ ,  $t = 8.683$ ,  $p < .001$ ). This finding suggests that students who find e-learning systems enjoyable and satisfying are substantially more likely to intend to continue using these systems. The large standardized beta coefficient highlights the central role of intrinsic motivation in influencing technology acceptance.

Social influence was also found to be a significant positive predictor of behavioural intention ( $\beta = .232$ ,  $t = 3.723$ ,  $p < .001$ ). This result indicates that encouragement and expectations from peers, instructors, or other significant individuals contribute positively to students' intention to use e-learning systems.

In contrast, perceived ease of use did not exhibit a statistically significant independent effect on behavioural intention ( $\beta = .078$ ,  $t = 1.211$ ,  $p = .228$ ). Despite its positive correlation with behavioural intention, the non-significant regression result suggests that ease of use does not independently predict intention when perceived enjoyment and social influence are considered simultaneously.

The regression constant was not statistically significant ( $B = .139$ ,  $t = .512$ ,  $p = .609$ ), indicating that behavioural intention is largely explained by the predictors included in the model.

#### Summary of Regression Findings

Overall, the multiple regression results demonstrate that perceived enjoyment and social influence are significant determinants of behavioural intention to use e-learning systems, with perceived enjoyment exerting the strongest influence. Conversely, perceived ease of use does not independently predict behavioural intention once affective and social factors are taken into

account. These results suggest that in e-learning adoption contexts, students' enjoyment and social environment play more critical roles than system usability alone.

## Discussion

This study examined the extent to which perceived ease of use, social influence and perceived enjoyment predict behavioural intention to use e-learning systems among university students, using an extended Technology Acceptance Model (TAM). The findings provide important empirical insights into the relative importance of usability, social context and intrinsic motivation in shaping students' intention to adopt and continue using e-learning systems.

The correlation analysis revealed that all three independent variables were positively and significantly associated with behavioural intention. In particular, perceived enjoyment showed the strongest correlation with behavioural intention, followed by social influence and perceived ease of use. These results suggest that students are more inclined to use e-learning systems when they find them enjoyable, experience social encouragement and perceive the systems as easy to use. The positive intercorrelations among the independent variables further indicate that usability, social factors and enjoyment are interconnected aspects of students' overall learning experience.

More robust conclusions emerge from the multiple regression analysis. The regression results demonstrate that perceived enjoyment is the strongest and most significant predictor of behavioural intention, even when social influence and perceived ease of use are controlled for. This finding highlights the central role of intrinsic motivation in technology acceptance. When students experience pleasure, interest, or enjoyment during system use, they are substantially more likely to intend continued use of e-learning systems. This aligns with recent empirical research suggesting that affective factors play a dominant role in sustaining technology use beyond initial adoption stages.

The results also indicate that social influence significantly predicts behavioural intention, although its effect is weaker than that of perceived enjoyment. This finding suggests that social environments—such as encouragement from peers, instructors, or institutional expectations—remain influential in shaping students' technology use intentions. In academic settings, students' decisions to use e-learning systems may be reinforced by perceived norms and expectations communicated through instructional practices and peer interactions.

In contrast, perceived ease of use did not emerge as a statistically significant predictor of behavioural intention in the regression model, despite its positive and significant correlation with intention. This suggests that while students may value usability, ease of use alone does not independently drive intention once enjoyment and social influence are taken into account. One possible explanation is that contemporary university students have become increasingly familiar with digital technologies, reducing the relative importance of usability as a differentiating factor. Instead, students may prioritise how enjoyable the system is and whether its use is socially encouraged or academically expected.

Taken together, these findings suggest that in the context of e-learning system adoption, affective and social factors outweigh purely functional considerations. While system usability remains important in supporting positive user experiences, it may serve as a foundational

condition rather than a direct motivational driver of continued use. From a theoretical perspective, the findings support extensions of the Technology Acceptance Model that incorporate intrinsic motivation and social influence to better explain technology acceptance in educational contexts.

Overall, the study underscores that students' enjoyment and social environment play pivotal roles in shaping behavioural intention to use e-learning systems, while perceived ease of use alone may be insufficient to motivate continued engagement. These insights contribute to the growing literature on technology acceptance in higher education by clarifying the relative influence of key TAM constructs within a single predictive model.

## Conclusion and Implications

### Conclusion

This study examined the factors influencing behavioural intention to use e-learning systems among university students by extending the Technology Acceptance Model to include perceived ease of use, social influence and perceived enjoyment. Using data from 151 valid respondents and applying correlation and multiple regression analyses, the study provides empirical evidence on the relative importance of usability, social context and intrinsic motivation in shaping students' e-learning adoption intentions.

The findings demonstrate that although perceived ease of use, social influence and perceived enjoyment are all positively associated with behavioural intention at the correlational level, only perceived enjoyment and social influence emerged as significant predictors in the regression model. Among these, perceived enjoyment exerted the strongest influence on behavioural intention, highlighting the dominant role of intrinsic motivation in students' continued intention to use e-learning systems. In contrast, perceived ease of use did not independently predict behavioural intention once enjoyment and social influence were taken into account.

Overall, the results suggest that while system usability remains an important foundational aspect of e-learning system design, students' intention to use such systems is more strongly driven by affective experiences and social encouragement. These findings contribute to the technology acceptance literature by reinforcing the importance of extending traditional TAM constructs to better capture students' motivations in contemporary higher education contexts.

### Theoretical Implications

From a theoretical perspective, this study supports the extension of the Technology Acceptance Model by incorporating affective and social constructs to explain students' behavioural intention to use e-learning systems. The strong predictive role of perceived enjoyment suggests that intrinsic motivation is a critical determinant of technology acceptance in educational settings. This finding aligns with recent empirical research that emphasises the limitations of relying solely on functional variables such as perceived ease of use to explain technology adoption among digitally experienced student populations.

Furthermore, the significant effect of social influence highlights the continued relevance of social and contextual factors in shaping technology acceptance, even in individualised learning

environments. Together, these results provide empirical support for more holistic models of e-learning adoption that integrate technological, social and affective dimensions.

### **Practical Implications**

The findings of this study offer several practical implications for higher education institutions, educators and e-learning system designers. First, institutions should prioritise designing e-learning systems that are not only functional but also engaging and enjoyable. Features that promote interactivity, visual appeal and user satisfaction may enhance students' intrinsic motivation and, consequently, their intention to continue using e-learning systems.

Second, the significance of social influence suggests that educators and institutions play an important role in shaping students' e-learning adoption intentions. Encouragement from instructors, integration of e-learning systems into coursework and positive reinforcement from peers may strengthen students' willingness to use such systems. Institutions may therefore consider implementing strategies that foster supportive learning communities and clearly communicate the value and expectations associated with e-learning system use.

Although perceived ease of use did not emerge as a significant independent predictor, usability should not be disregarded. Instead, ease of use should be viewed as a basic requirement that supports positive user experiences, which may indirectly enhance enjoyment and facilitate social engagement within e-learning environments.

### **Overall Contribution**

In summary, this study provides empirical evidence that perceived enjoyment and social influence are key determinants of behavioural intention to use e-learning systems, while perceived ease of use plays a supporting rather than dominant role. By clarifying the relative contributions of these factors, the study offers valuable insights for both theory and practice and supports the development of more user-centred and socially supported e-learning environments in higher education.

### **Limitations and Future Research**

Despite the contributions of this study, several limitations should be acknowledged, which also provide directions for future research. First, the study employed a cross-sectional research design, which limits the ability to establish causal relationships among perceived ease of use, social influence, perceived enjoyment and behavioural intention to use e-learning systems. Although multiple regression analysis allows for the examination of predictive relationships, longitudinal research designs would enable future studies to assess changes in students' behavioural intentions over time and to better infer causal mechanisms underlying e-learning adoption.

Second, the data relied on self-reported measures, which may be subject to common method bias, social desirability effects, or respondents' subjective interpretations of questionnaire items. While self-report instruments are widely used in technology acceptance research, future studies may incorporate objective usage data, such as system log records or learning analytics, to complement perceptual measures and provide a more comprehensive assessment of students' e-learning behaviour.

Third, the sample was drawn from a single public university context, which may limit the generalisability of the findings to other higher education institutions or educational settings. Students' perceptions of e-learning systems and their behavioural intentions may vary across institutions with different learning technologies, instructional practices, or cultural contexts. Future research should therefore replicate the study across multiple universities, disciplines, or countries to enhance the external validity of the findings.

Fourth, although the extended Technology Acceptance Model explained a substantial proportion of variance in behavioural intention, the model did not include other potentially relevant factors, such as facilitating conditions, perceived usefulness, self-efficacy, or institutional support. Future studies could extend the model further by incorporating additional constructs or examining mediation and moderation effects to gain deeper insights into the complex processes that influence e-learning system adoption.

Finally, future research may also explore qualitative or mixed-methods approaches to complement quantitative findings. Interviews or focus group discussions could provide richer insights into students' experiences, motivations and challenges when using e-learning systems, thereby uncovering contextual factors that may not be fully captured through survey data alone. In summary, while this study offers valuable empirical insights into the factors influencing behavioural intention to use e-learning systems, addressing these limitations in future research will contribute to a more nuanced and holistic understanding of technology acceptance in higher education contexts.

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